

NATURE PROTECTION MANAGEMENT

Extensive grazing

In the land purchased by us, extensive grazing used to provide habitat to a wide variety of organism and also maintain the traditional, characteristic landscape. In the area there used to be a high number of grazing animals (sheep, milking cows, cattle and horses) owned by the village-dwellers and a smaller area was mowed. During the 20th century, first the industrialisation of agriculture and later the dramatic decrease in the number of grazing animals led to biodiversity loss in various habitats, endangering species richness of the area.

On our lands, we apply extensive grazing using traditional breeds and through education of neighbouring graziers we try to disseminate traditional management methods.



Collaborating with a local grazier we are grazing meadows of conservation value in the area with Gyimes Racka Sheep. Gyimes Racka is an old Hungarian breed of sheep, exceedingly adapted to local conditions and extensive grazing. By grazing and trampling they create short-grass meadow, providing feeding habitat to several rare and protected bird species, as some of the steppe birds cannot forage in tall, closed grassland.

We played an important role in bringing back dairy sheep to some sheep farms by the end of the 1990s. Besides Merino Sheep, mostly kept for its wool, Cigája, an endemic sheep breed with higher milk yield has been kept. Thanks to this breed, the farms have become more resilient and besides, during the last decade the number of animals grazing on the meadows has also started to increase.

Typical to the Bihar landscape is that among the property names there is nearly always an area called "foal pasture", indicating that a grazing stud used to form a common part of life. Since Bihar Public Foundation was formed, there has constantly been a grazing stud at each pasture. We want to achieve multiple aims with this: we assure the most adequate conditions for the horses and grazing by horses encourage the formation of a diverse grassland mosaic. We can notice a change of attitude among horse-keepers as well, more people are looking to adapt extensive husbandry.

The mosaic of grazed grasslands provides favourable foraging and hunting grounds to several birds. Members of a Red-footed Falcon (*Falco vespertinus*) colony in a nearby group of black locust trees hunt for voles and bigger insects almost exclusively in these areas. Hoopoes (*Upupa epops*) and lesser Grey Shrikes (*Lanius minor*) that breed nearby regularly appear around heavily-grazed areas.

Extensive cultivation

Monocultures and intensive cultivation became typical in many areas of the Bihar plains. During the industrialisation of agriculture many plots of land with extremely low productivity got ploughed. One of our objectives was to cultivate agricultural areas that have low productivity and potentially high conservation values extensively, and popularise these technologies. We obtained the agricultural machinery necessary for cultivation, as one of the crucial parts of the protection of species of conservation value is treatment at a suitable time.

Some of the purchased land is getting converted back into meadows. On one hand, this will increase landscape and habitat diversity in the agroecosystems, and on the other hand we increase the extent of already existing meadows. By doing this, we provide habitat to several meadow-dependent species. Many bird and animal species that are present in agricultural areas can be found in stronger, denser populations in areas that have been converted from agricultural lands to more natural grasslands.



Areas that are properly managed for conservation purposes and are extensively cultivated provide habitat for the Great Bustard (*Otis tarda*). A typical breeding bird of these areas is the Grey Partridge (*Perdix perdix*) and the Tawny Pipit (*Anthus campestris*). Among raptors, Short-toed Eagles (*Circaetus gallicus*) frequently come here to feed during migration and Golden Eagles (*Aquila chrysaetos*) in the winter. In 2008 a pair of Eastern Imperial Eagles (*Aquila heliaca*) was also present, which gives us hope for their future breeding.

Some areas are less suitable for agriculture as they are frequently flooded, depending on the present meteorological conditions. We have purchased some of these flooded areas, in which we will provide ideal conditions for the settlement of a rich waterbird-community in wet years and other species will use them as feeding grounds during migration. In these areas, until the reappearance of natural vegetation we can destroy weedy vegetation using our own machinery after the breeding season. In other cases, it is sufficient to maintain extensive cultivation and in wet years to minimise disturbance for birds breeding there.



The temporal, bigger lakes attract masses of migrating birds, sometimes the huge flocks of Eurasian Golden Plover (*Pluvialis apricaria*), Dunlin (*Calidris alpina*) and Ruff (*Philomachus pugnax*) contain individuals of rarer species, such as Red Knot (*Calidris canutus*) or Ruddy Turnstone (*Arenaria interpres*). On safe islands surrounded by water, Pied Avocets (*Recurvirostra avosetta*) and Common Terns (*Sterna hirundo*) breed, while the flooded meadows are colonised by Common Redshanks (*Tringa totanus*) and sometimes White-winged Terns (*Chlidonias leucoptera*). In parts with big clumps of vegetation a couple of Spotted Crakes (*Porzana porzana*) find a good nest site.

Fish ponds

Bihar Public Foundation manages extensively more than 500 hectares of fish ponds in the second biggest fish pond systems of Hungary. As there is no economic intervention, masses of waterbirds find undisturbed nesting and resting areas here.

The most important management action for conservation is the yearly flooding of the ponds to maintain the desired water level. The timing of the flooding is very important, it has to be finished before breeding season, so the herons, geese and ducks find water levels adequate for breeding. Shallower ponds dry out by mid-summer, early autumn, coinciding with the autumn migration of many waterbirds. Therefore, we can provide adequate mudflats for the great number of migrating waders.

The strengthening of reeds and cattails in the ponds is a desired process to a certain degree, as many herons, geese and reed-dwelling passerines find nest sites among them. However, disappearing open water and mudflats decrease the amount of available resting and feeding habitat. For this reason, it is important to control wetland plants in the winter by cutting reed or disking and crushing stems in the dry ponds.

Given the rich avifauna of the ponds detailed bird surveys are conducted on a weekly basis, however, to ensure undisturbed conditions our colleagues check on the area daily.



Given the undisturbed conditions, in the masses of geese between spring and autumn there are regularly rare, threatened species, such as lesser White-fronted Geese (*Anser erythropus*) and Red-breasted Geese (*Branta ruficollis*). In the winter, along White-tailed Eagles (*Haliaeetus albicilla*) there are regularly one or two individuals of the similarly threatened Greater Spotted Eagle (*Aquila clanga*). In the reed beds surrounding the ponds there are Eurasian Bittern (*Botaurus stellaris*), Little Bittern (*Ixobrychus minutus*), Purple Heron (*Ardea purpurea*) and Great Egret (*Egretta alba*) breeding, meanwhile in the end of summer and in the autumn even 600 Common Spoonbills (*Platalea leucorodia*) and more, than 150 Black Storks (*Ciconia nigra*) could gather. Among others, passerines are represented by Savi's Warbler (*Locustella luscinioides*), Moustached Warbler (*Acrocephalus melanopogon*), Bearded Tit (*Panurus biarmicus*), European Penduline Tit (*Remiz pendulinus*) and Bluethroat (*Luscinia svecica*).



Dear Reader! If you agree with our goals, programmes and activities seen above, and if you would like to join us in protecting the natural and cultural values of the Bihar region, please support our efforts.

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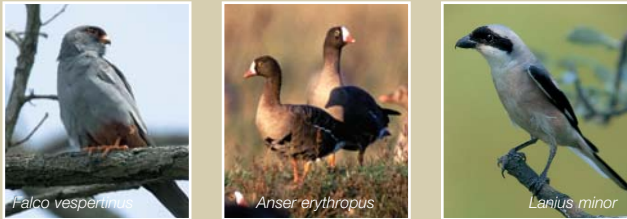
BIHAR

PUBLIC FOUNDATION



10 years
in service of Nature





Bihar Public Foundation was funded in 1999 to preserve natural and cultural values of the Bihar region, maintain its biodiversity, protect endangered areas that are important for the natural image of the country, encourage the propagation of environmentally-friendly management techniques and educate people in order to obtain these goals.

Since its formation, in collaboration with governmental and non-governmental conservation organisations in the region Bihar Public Foundation has made accomplishments that positively influence the future of areas rich in natural values in the region and encouraged conservation-conscious behaviour of its inhabitants.

Natural values

Bihar Public Foundation owns and manages more than 1100 hectares of land in Bihar and southern Nyirseg that provide habitat to protected and endangered species. The Bihar region is characterised by a mosaic of meadows, tillages and fallows. Waterbirds and steppe species are the most important members of its avifauna. The meadows, the salt lake, the sand dunes, marsh and buffer tillages purchased by the organisation help to connect protected areas in the region by creating green corridors.

Bihar Public Foundation manages nearly 500 hectares of fishponds at the Biharugra fish ponds. This area is one of the most important waterbird habitats in the country, a wetland of international importance. The whole area of the fishponds is protected, some parts highly protected, declared Ramsar site since 1997.



Steppe habitat

The area near Földes - mostly grassland with patches of sedge - is one of the biggest continuous meadows. A significant part of it has been purchased by the Bihar Public Foundation for demonstration and conservation purposes. The Sárrét canal - which used to be the Blue Kallo River before the drainage, supplying water to the wildlife of Sárrét - provides habitat to many water-dependent organisms even today. In drought, the shallow ponds forming along the canal attract migrating shorebirds: Wood Sandpiper (*Tringa glareola*) is common in spring and mid-summer, Common Snipe (*Gallinago gallinago*) can pass in great numbers during migration and one or two Great Snipes (*Gallinago media*) can also be seen occasionally.



The *Allopecurus* and *Festuca* mosaic-meadows of the area are frequently inhabited by a few pairs of Black-tailed Godwits (*Limosa limosa*) and Common Redshanks (*Tringa totanus*). In the recently mowed parts the European Roller (*Coracias garrulus*) likes to hunt for locusts and lizards, while, especially during spring migration, groups of Whimbrel (*Numenius phaeopus*) and Eurasian Curlew (*Numenius arquata*) like to stop-over in this area. A characteristic member of the barren areas is the Wolf Spider (*Lycosa syngoriensis*), our biggest spider species.



The extensive steppe areas are broken up by small patches of woodland, in which the nationally rare and protected Red-footed Falcons (*Falco vespertinus*) breed. At the beginning of the 20th century, Red-footed Falcons used to have huge colonies in Hungary and protecting the severely diminished population is one of the biggest challenges for nature conservation. In 2007 there were only 14 pairs of red-footed falcons breeding in the protected areas and the neighbouring woodland patches. Hoopoes (*Upupa epops*), Long-eared Owls (*Asio otus*) and lesser Grey Shrikes (*Lanius minor*) breed in the woodland patches surrounded by steppe habitat.

Bihar and southern Nyirseg

Bihar Public Foundation has also purchased other areas of conservation value in the Bihar and southern Nyirseg region.

The most important plant species of these areas are Globe-flower (*Trollius europaeus*), Siberian Ibis (*Iris sibirica*), Marsh Gentian (*Gentiana pneumonanthe*), Military Orchid (*Orchis militaris*) and the Angelica species (*Angelica palustris*). A typical, endemic plant of the salt pans is the plantain species *Plantago schwarzenbergiana*.



One of the most beautiful and most natural salt lakes of the region is the Konyári Salt Lake, which we managed to purchase. The Konyári Salt Lake, especially in wet years provides important breeding habitat for waterbirds, mainly for shorebirds, which regularly nest here. From time to time, Black-winged Stilts (*Himantopus himantopus*), Northern Lapwings (*Vanellus vanellus*) and Common Redshanks (*Tringa totanus*) nest here.

Bihar Public Foundation has purchased shares in a steppe area containing a nest of the Saker Falcon (*Falco cherrug*). This endangered bird has been nesting for years in an artificial nest placed in a patch of woodland. Hungary plays an important role in the international protection of the saker falcon, as the Carpathian basin holds the most important breeding population in Europe.



HABITATS

Biharugra and Begécs Fish Ponds

Nearly 500 hectares of the second most extensive fish pond system in Hungary are managed by us, an extent unique among land owned by Public Foundations in the country. The pond system is priceless for birds, as many endangered species breed and stop over here during migration and several internationally threatened species are also regularly seen.

Several heron species breed in the reed beds, among them the Purple Heron (*Ardea purpurea*) is regular. The other interesting breeding species, the Eurasian Bittern (*Botaurus stellaris*), is seldom seen. One of the most common breeding herons is the Great Egret (*Egretta alba*). Flocks of Common Spoonbills (*Platalea leucorodia*) often visit the ponds from nearby rookeries to fish.



In the winter, tens of thousands of geese spend the nights on the lakes and feed on the nearby meadows and agricultural lands. Sometimes smaller flocks of Red-breasted Geese (*Branta ruficollis*) and lesser White-fronted Geese (*Anser erythropus*) appear among them. If the lakes are not frozen, the number of wintering ducks - mostly Mallards (*Anas platyrhynchos*) - can reach 50,000. In spring and autumn thousands of northern Shovelers (*Anas clypeata*) and Common Teals (*Anas crecca*) migrate through, but Gadwalls (*Anas strepera*) and Northern Pintails (*Anas acuta*) also gather in big flocks. In the autumn, the two lake systems provide important gathering areas for the threatened Ferruginous Duck (*Aythya nyroca*), recently more than two thousand individuals were counted at one time.

Among raptors, White-tailed Eagle (*Haliaeetus albicilla*) has been breeding in the area for years, but in winter 103 individuals have been counted. During winter or in migration individuals of Greater Spotted Eagle (*Aquila clanga*) can be seen almost every year.

Early in the spring thousands of Black-tailed Godwits (*Limosa limosa*) and Ruffs (*Philomachus pugnax*) appear in the drained ponds. In the shallow parts there could be flocks of hundreds of Pied Avocets (*Recurvirostra avosetta*) feeding and under suitable conditions, breeding. During the past few years Black-winged Stilts (*Himantopus himantopus*) have been present in increasing numbers. In the end of summer in 2007, more than 100 individuals were found on the Begécs system.



Every year, Black-headed Gulls (*Larus ridibundus*) and Common Terns (*Sterna hirundo*) breed on the islands in the lake. If there is sufficient amount of floating aquatic vegetation, Whiskered Terns (*Chlidonias hybridus*) will colonise the lake. Black-necked Grebes (*Podiceps nigricollis*) regularly accompany them in the colony.

In the vegetation along the lake shore singing Bluethroats (*Luscinia svecica*) and Moustached Warblers (*Acrocephalus melanopogon*) can be heard and feeding flocks of Bearded Tits (*Panurus biarmicus*) can also often be found.



EDUCATION

Since its formation, Bihar Public Foundation has been placing a big emphasis on familiarising people with conservation values and disseminating conservation-oriented way of thinking.

By purchasing an ex-Russian army base we started a conservation centre for half of the county. As part of a French-Hungarian collaboration we first managed to get rid of the military aspect of the army base. We made a reception building and demolished the neighbouring buildings that were in very bad condition. The building which was the biggest (440 m²) and in the best condition was chosen to be turned into the interpretive and interactive centre. Work started in 2007 and by spring 2008 the roof was on a building suitable for summer activities.



Because the interpretive centre is in a grassland habitat in a Natura 2000 area, its conservation values and the relevant conservation activities can be shown. At the moment, there is herd of horses and a flock of Hortobágy Racka sheep grazing in the grassland maintained by extensive grazing.



We have formed a good, reciprocally beneficial working relationship with the educational facilities of the dwellings of Bihar. Teachers feel that it is their shared responsibility to educate the children growing up in the region in nature conservation with our help. Each year there is a string of activities for the children and their teachers with the aim of familiarising them with conservation values of the region. During this, we always aim to encourage the conservation-consciousness of the participant, facilitate their meeting with conservation experts and introduce traditional farming and meadow-management practices and life-style. 16-22 dwellings take part in this program annually. By establishing the nature conservation centre, we provide a location for the conservation work ongoing for more than a decade in the region.